

U.S. Antarctic Marine Living Resources Program

2013/2014 Weekly Field Reports

Cape Shirreff, Livingston Island

Volume 4
25 November 2013

Science Report

Seabirds

1. Peak clutch initiation for gentoos occurred on the 22nd November. Out of the 50 nests in our reproductive study, 70% of gentoos have initiated clutches, 40% have complete clutches, 28% have one egg, and 2% have failed.
2. Peak clutch initiation for chinstraps occurred on the 23rd of November. Out of the 100 nests in our reproductive study, 58% of the chinstraps have initiated clutches, 18% have complete clutches and 39% have one egg.
3. We have continued to re-sight known-age penguins. Sixteen known-age gentoos have initiated clutches, with seven nests having complete clutches. One nest has already failed.. There are 20 known-age chinstraps that have initiated clutches, with only four having complete clutches so far.
4. We began monitoring skua activity this week. Pairs have been attending their territories but nest bowls were only noted on two territories, and none have initiated clutches.
5. There are currently 30 active gull nests on the Cape.

Pinnipeds

6. The last of the female elephant seals has weaned her pup and has returned to sea. We completed our tagging effort of recently weaned elephant seal pups. In total we tagged and collected DNA from 35 pups.
7. We surveyed Punta San Telmo west of Cape Shirreff, where in previous years some elephant seals have bred. This year there were no pups or breeding adults. This confirms the total pup production for Cape Shirreff was 35. Last year there were 25 pups born.
8. At the last census of fur seal study beaches on 24 November, we recorded a total of 47 adult females with 14 pups.
9. We have recorded 14 tagged fur seals to date. Nine of these individuals represent known-age seals that were tagged here as pups.



10. In order to get ready for the perinatal attendance female fur seals, we have concluded range tests of our two VHF receiving stations for monitoring fur seal trip duration. Both stations, including the new receiving station on Aymara, are now ready to begin logging instrumented fur seals.
11. In the last weekly census of phocids on the Cape, we recorded 54 elephant seals, 40 Weddell seals, and no crabeater or leopard seals.
12. On 18 November we had a second juvenile leopard seal haul out on one of our study beaches. As with the first, we were able to place a tag on this individual as well as collect DNA, vibrissae, and photos. Ground-based photogrammetry was used to determine standard lengths for the two seals at 199 and 170 cm, respectively.
13. On 24 November we completed our first test flight with the hexacopter. All aircraft components, camera functions, and flight control modes (altitude hold, position hold, and come home) were tested and performed successfully.

Weather

14. It was a slightly warmer week this week, with a regular dose of wind from just about every direction. The mean temperature for the week was -0.2°C . The high for the week was 2.4°C and the low was -3.3°C . Total precipitation this week was 0.51 inches. The wind swung from the west (41%), to the north (24.4%) the east (23.2%) and then back. Mean wind speed was 11.2 mph with maximum of 45 mph. Mean solar radiation this week was 13,209 watts per sq. meter. Sunrise and sunset are 03:26 and 22:06 respectively as we continue to gain an hour of sunlight every 10 days.

Camp

15. Snow shoveling and ice-picking continues apace and we have now cleared paths to the outhouse, fur seal lab, workshop, generator, supply hut, and front porch all down to deck level.
16. The third of our four generators failed this week, due to a small leak in the carburetor fittings. Repairs were made to another unit ('Herbie'), though, so we are back up to two working 3 Kw generators, and one 2 Kw back up. The new battery bank continues to function well.
17. Our fresh water is still completely frozen, so we've been using snow melt and bringing frozen water barrels into the hut to thaw as needed. This week we brought in our 3rd full barrel. We are averaging one new barrel per 9 days at the moment.



18. A space on the deck for the BBQ grill was dug out this week, and the grill taken from storage just outside the shower area. During that process we found the 'missing' door cover from the drying shed lying flat and partially damaged on the deck.
19. We have continued to unpack totes of food and equipment from the overwinter and opening stores, and are making good progress.
20. In anticipation of the coming Thanksgiving holiday, we excavated the smoker box from the snow and tested the fit of a used smoker that was donated to the program. Charcoal has been set to dry, turkeys are thawing in the freshies room and menu planning has begun during evening conversations. We are pretty darned excited.

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